

REMARKS

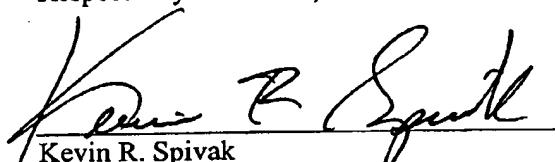
Amendments to the specification have been made and are submitted herewith in the attached Substitute Specification. A clean copy of the specification and a marked-up version showing the changes made are attached herewith. The claims and abstract have been amended in the attached Preliminary Amendment. All amendments have been made to place the application in proper U.S. format and to conform with proper grammatical and idiomatic English. None of the amendments herein are made for reasons related to patentability. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 449122014800. However, the

Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

For the convenience of the Examiner, the changes made are shown below with deleted text in strikethrough and added text in underline.

In the Claims:**Patent claims****What is claimed is:**

1. (Amended) A method for producing at least one signal (~~oscillation signal Pd~~), which indicates an oscillation in an electrical power supply system, ~~in which method comprising:~~

~~the sampling a phase current and the a phase voltage are in each case sampled from at least one phase of the power supply system, forming phase current and phase voltage sample values (i, u);~~

~~forming impedance values are formed from the phase current and phase voltage sample values;~~

~~monitoring the impedance values are monitored for the presence of any an oscillation and, if an oscillation is identified, at least one memory element (Sp) is set, and the oscillation signal (Pd) is output at its output;~~

~~after setting the memory element (Sp), checking other further impedance values are checked to determine whether the oscillation that has been found is still continuing after setting the memory element; and~~

~~the memory element (Sp) remains uninfluenced if the oscillation continues, and resetting the memory element is reset if the oscillation has stopped, wherein characterized in that~~

~~the check of the further other impedance values makes use of uses an oscillation model which is formed from previous impedance values associated with the oscillation, or from variables which are dependent on these the impedance values,~~

~~a check is carried out performed to determine whether a further other impedance values formed at that time or a variable which is dependent on this further the other impedance values differ from the oscillation model, and~~

any an occurrence of a further other impedance values or of a variable dependent on this the impedance values which differs from the oscillation model is assessed as the oscillation having stopped.

2. (Amended) The method as claimed in claim 1, wherein characterized in that the oscillation model is determined by means of a least squares estimation method.

3. (Amended) The method as claimed in claim 2, wherein characterized in that a function in the form $f(x)=ax^3+bx^2+cx+d$ with the parameters a, b, c and d, for which one or more parameters can be defined to be zero from the start, or a sum of decaying sine and cosine functions is used as the model rule for the oscillation model.

4. (Amended) The method as claimed in ~~one of claims 1 to 3, characterized in that claim 1, wherein~~ resistance values (R) are used as the variable dependent on the impedance values.

5. (Amended) The method as claimed in ~~one of claims 1 to 3, characterized in that claim 1, wherein~~ reactance values (X) are used as the variable dependent on the impedance values.

6. (Amended) The method as claimed in ~~one of claims 1 to 3, characterized in that claim 1, wherein~~ time derivative values (dZ/dt) of the impedance are used as the variable dependent on the impedance values.

7. (Amended) The method as claimed in ~~one of claims 1 to 3, characterized in that claim 1, wherein~~ time derivative values (dR/dt) of a resistance are used as the variable dependent on the impedance values.

8. (Amended) The method as claimed in ~~one of claims 1 to 3, characterized in that claim 1, wherein~~ time derivative values (dX/dt) of a reactance are used as the variable dependent on the impedance values.

9. (Amended) The method as claimed in ~~one of claims 1 to 8, characterized in that claim 1,~~ wherein positive phase sequence system impedance values are formed from the phase current and phase voltage sample values (i, u), and a common memory element (S_p) is provided, and a common oscillation signal (P_d) is produced, for all the phases in the power supply system.

10. (Amended) The method as claimed in ~~one of claims 1 to 8, characterized in that claim 1,~~ wherein phase impedance values are formed from the phase current and phase voltage sample values (i, u) of each phase of the power supply system to be investigated for oscillation, and a dedicated memory element (S_p) is provided, and a dedicated oscillation signal (P_d) is produced, for each of these phases.

11. (Amended) The method as claimed in claim 10, characterized in that ~~wherein in order to form the phase impedance values,~~

a variable U_{re} containing including the real part of the phase voltage sample values, a variable U_{im} containing including the imaginary part of the phase voltage sample values, a variable I_{re} containing including the real part of the phase current sample values and a variable I_{im} containing including the imaginary part of the phase current sample values are formed from the phase current and phase voltage sample values (i, u) for each phase,

a phase real power variable P is determined from $P = U_{re} \cdot I_{re} - U_{im} \cdot I_{im}$,

a phase Wattless component variable Q is determined from $Q = U_{im} \cdot I_{re} + U_{re} \cdot I_{im}$,

a squared phase current amplitude variable I^2 is determined from $I^2 = I_{re} \cdot I_{re} + I_{im} \cdot I_{im}$,

system-frequency components are ~~in each case~~ removed by means of a least squares estimation method from the phase real power variable P , from the phase wattless component variable Q and from the squared phase current amplitude variable I^2 , and

phase resistance values R are determined from $R = P/I^2$ and phase reactance values X are determined from $X = Q/I^2$, and phase impedance values $Z = R + jX$ are thus determined.

In the Abstract:

Please replace the Abstract with the substitute Abstract attached hereto.